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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/399,729	09/20/1999	BRIAN YANG	EM/YANG/4998	2597

7590 07/26/2007  
BACON & THOMAS  
625 SLATERS LANE  
4TH FLOOR  
ALEXANDRIA, VA 22314

EXAMINER
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LEE, PING

ART UNIT	PAPER NUMBER
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2615

MAIL DATE	DELIVERY MODE
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07/26/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

09/399,729

**Applicant(s)**

YANG ET AL.

**Examiner**

Ping Lee

**Art Unit**

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 and 17-30 is/are pending in the application.
- 4a) Of the above claim(s) 22-28 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17-21 is/are allowed.
- 6) ☒ Claim(s) 1-9, 29, 30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Newly submitted claims 22-28 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: claims 22-27 are directed as non-elected species as indicated on the election/restriction requirement as mailed on 9/15/03 and the subsequent election made without traverse on 10/14/03.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 22-27 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The newly amended claim 1 specifies the second driving signal. However, the specified limitations do not correspond to the elected species as illustrated in Fig. 6. The phrase that caused the question is "converting a first input based on said second data group into a second driving signal". The second data group is represented by

B2~0 as shown in Fig. 6, the second driving signal is the signal generated by AND gate 23 (or 21, or 22), the second input signal in the claim is generated by XOR gate 15. Now, there is no the claimed "first input signal" in Fig. 6, let alone the claimed "converting a first input signal. Claim 4 has the similar language.

***Claim Rejections - 35 USC § 102***

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
5. Claims 29 and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Flynn (US 5,764,173).

Regarding claims 29 and 30, Flynn discloses a driving circuit and a corresponding driving method of speaker for converting digital sound data into corresponding driving signals to drive said speaker, the driving method comprising the steps of:

dividing said digital sound data into at least two data groups, including a first data group (8 in Fig. 1) and a second data group (6 in Fig. 1);

modulating said first data group into a first driving signal, wherein the magnitude of said first data group is represented by pulse width of said first driving signal (by 12 in Fig. 2);

converting said second data group into second driving signal according to said second data group, wherein the magnitude of said second data group is represented by

pulse height of said second driving signal (14 in Fig. 2; the value of 6 is represented by the combination of 0 and 1; 0 has no height while 1 has a height; see also Fig.5);

outputting a speaker driving signal according to at least said second driving signal (see Fig. 4; col. 4, lines 56-59); and

driving said speaker according to said speaker driving signal (col. 3 lines 43-49).

### ***Response to Arguments***

6. Applicant's arguments filed 11/9/04 have been fully considered but they are not persuasive.

Applicant argued that Flynn does not show that the magnitude of the second data group is represented by pulse height of the second driving signal. This is not persuasive. As shown in Fig. 5, the second data group is represented by 0 and 1; wherein 0 has no pulse height, and 1 has a pulse height. Depending on the values of the second data group, the value of the second driving signal is changed accordingly.

### ***Allowable Subject Matter***

7. Claims 17-21 are allowable over the prior art in the record.

### ***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

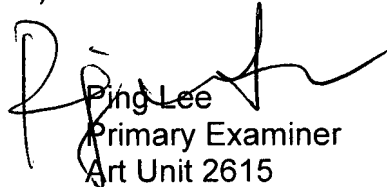
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ping Lee whose telephone number is 571-272-7522. The examiner can normally be reached on Monday, Wednesday and Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian C. Chin can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2615

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Ping Lee  
Primary Examiner  
Art Unit 2615

pwl